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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Rainer Schenk

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EXAMINER

WAITS, ALAN B

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,200	<b>Applicant(s)</b> SCHENK ET AL.	
	<b>Examiner</b> ALAN B. WAITS	<b>Art Unit</b> 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8-10 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8-10 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “venting groove” must be shown or the feature(s) canceled from the claim(s). Numeral 26 does not point to a groove. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
3. Claim 1 objected to because of the following informalities: "a second sealing lip" should be --the second sealing lip-- in the 4<sup>th</sup> line from the bottom of claim 1. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-3, 5, 6, 8-10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and 3 recites the limitation "a flexible seal". It is unclear if this is the same as the first and second sealing lips or if the recited structure is in addition to the first and second sealing lips.

Claim 1 and 3 recites the limitation "a force component acting in a clockwise direction crosswise to the axis of rotation". This limitation is still unclear and confusing. The examiner notes that clockwise only applies to the fig 1. If the invention of applicant were viewed from the other side, the direction would be counterclockwise. Also, the same side, viewed at the bottom of the bearing instead of the top view as shown in

Art Unit: 3656

figure 1 would also be counterclockwise. The examiner recommends that Applicant amend the claims to remove the "clockwise" language and replace it with directions and references which would hold true no matter which frame of reference were chosen to view the bearing. For example, stating something to the effect that --a force component acts in a radially outward direction as well as an axially inward direction--.

Claim 5 recites the limitation "the sealing lip". It is unclear which sealing lip is being referred to in this instance.

Claim 8 is grammatically awkward and confusing, rendering the claim unclear and indefinite.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-3, 5, 6, 8-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro USP 5133609 in view of Irwin USP 3627390.

Ishiguro discloses a similar device comprising:

#### **Re clm 1 and 3**

- An elastic sealing disk (1a, fig 6) running around with an outer bearing ring (2, fig 6) or a housing, having a reinforcement (10a) and positionally fixed with positive engagement in a receptacle or an annular groove (3)

Art Unit: 3656

- The sealing disk engaging with a flexible seal in a recess (5) of an inner bearing ring (4) and being supported by means of a sealing edge on a wall (6)
- A first sealing lip (7a) is supported axially on an outer wall of the recess and a second sealing lip (9a) is assigned to an inner wall of the recess with play
- A mass of the first sealing lip forming a center of mass, which, in a fitted position of the sealing arrangement, is offset in relation to a supporting line determined by the sealing disk in such a way that the centrifugal force acting at in clockwise direction crosswise to the axis of rotation of the bearing (fig 6)
- The first and second sealing lips being made to extend from a common sealing lip root of the sealing disk wherein
- A shoulder diameter of the inner bearing ring exceeds an inside diameter of the second sealing lip and a distance (a) between the inner wall of the recess and a free end of the second sealing lip is designed so that, even with a maximum rotational speed of the rolling-contact bearing, it ensures a distance  $a > 0$  (fig 6)

Ishiguro does not disclose:

- The first sealing disk has on the outside, on a side facing the second sealing lip, a bead

Irwin teaches a bead (50, fig 1) facing away from the contact point (38, fig 1) for the purpose of allowing disengagement from contact with nonrotating elements so as to not adversely affect the operating characteristics of the device but does create a seal when the device is not operating (col 1, ln 33-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Ishiguro and provide:

- The first sealing disk has on the outside, on a side facing the second sealing lip, a bead

for the purpose of allowing disengagement from contact with nonrotating elements so as to not adversely affect the operating characteristics of the device but does create a seal when the device is not operating.

**Re clm 2**, Ishiguro further discloses

- A shoulder diameter of the inner bearing ring exceeds an inside diameter of a second sealing lip (fig 6)

**Re clm 5**

- The sealing lip is arranged in an axial offset to an end face of the sealing disk in a mounting position (fig 6)

**Re clm 6**

- The second sealing lip, obliquely inclined in relation to the inner wall and designed as a toe wall, is arranged axially offset in relation to the first sealing lip by a distance (c) (fig 6)

**Re clm 8**

Art Unit: 3656

- The recess of the bearing ring has walls of different heights
- The straightened to the rolling elements and showing a diameter excels and opposite wall showing a diameter as well as an inside diameter of the second sealing lip (fig 6)

**Re clm 9**

- The first sealing lip being provided with at least one venting groove in a region of the sealing edge (fig 6)

**Re clm 10**

- The venting groove of which is made to extend in a radial or inclined manner (fig 6)

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguro USP 5133609 in view of Irwin USP 3627390 as applied to claim 1 above, and further in view of Kajihara USP 5544963.

Ishiguro in view of Irwin disclose all the claimed subject matter as described above.

Ishiguro further discloses

**Re clm 14**

- The reinforcement, formed in the manner of a disk, of the sealing disk being encapsulated at least on one side by an elastic sealing material of the sealing arrangement and the reinforcement forming on the outside an angled-away flange (fig 6)

Ishiguro does not disclose:



Art Unit: 3656

- and on the inside being a leg inclined obliquely in the direction of the recess

Kajihara teaches a sealing disk comprising:

- on the inside being a leg (portion of 20 at bottom, fig 1) inclined obliquely in the direction of the recess

Since both Ishiguro and Kajihara teach a sealing disk, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the reinforcement shape of Kajihara for the shape of Ishiguro and provide:

- On the inside being a leg inclined obliquely in the direction of the recess to achieve the predictable result of supporting the sealing lips.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-3, 5, 6, 8-10 and 14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3656

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656